

REMARKS

The Final Office Action mailed April 5, 2006 has been carefully considered. Reconsideration in view of the following remarks is respectfully requested.

Claim Objections

Claim 8 has been amended to change its dependency to claim 3, obviating the objection thereto.

Rejection(s) Under 35 U.S.C. § 103 (a)

Claims 1-15 were rejected under 35 U.S.C. § 103(a) as unpatentable over Delroy et al. (U.S. pat. no. 4,358,708¹) in view of Schult (U.S. pub. 2002/0008478).

Claim 1, from which claims 3, 5, 7 and 8 depend, recites, *inter alia*, a multistage depressed collector (MSDC) that includes first and second electron-collecting electrodes. The first electrode, according to claim 1, comprises a metallization layer. The Delroy device does not include a multistage depressed electrode; instead, it is a single-electrode device that has no other electrodes. Further, the single electrode in Delroy is a complex device including the main portion 1 which performs electron collection, and a separate, concentric copper tube 4 surrounding the main portion 1. The Office Action alleges that copper tube 4 is the metallization layer of which the claimed first electrode is comprised. However, copper tube 4 does not collect electrons as instantly claimed, and to underscore this distinction, claim 1 has been amended to state that the first electrode collects electrons that impact it. Copper tube 4 does not play this role. Moreover, copper tube 4 is not a metallization layer. Attention is respectfully directed to paragraph [0012] of the specification in which details of the metallization layer and the manner in which it is formed are provided. Based on this description, the claimed metallization is clearly different from the copper tube 4 of Delroy. These deficiencies are not remedied by Schult, which

also fails to show a metallization layer in the manner claimed. In addition, there is no motivation to combine the teachings of these references since Schult is directed to a multistage device, while Delroy is directed to a single electrode device. One of ordinary skill in the art would not look Schult to address issues that arise in Delroy, and there is no suggestion in either of these references that would support a contrary conclusion.

Claim 2, from which claims 4 and 6 depend, also recites first and second electron-collecting electrodes. Claim 2 also specifies that the first electrode is “adapted to collect electrons of a first energy level impacting the first electrode.” As discussed above, copper tube 4 of Delroy does not collect electrons. This function is performed by collector 1 coaxially nested in copper tube 4 in a complex arrangement different from that claimed. For this reason at least, and for the reason that the Delroy and Schult are not properly combinable, claim 2, and claims 4 and 6 dependent therefrom, is allowable over the applied references.

Claim 9, from which claims 10-15 depend, has been amended to state that the second means for conducting electricity is disposed on an inside of the insulating wall. This feature is not disclosed or suggested in either Delroy or Schult, and for this reason at least, claims 9-15 are patentable over these references taken singularly or in combination. In particular, element 36 of Schult to which the Office Action refers does not extend over both electrodes, and the second electrode cannot be said to be disposed on an inside insulating wall thereof.

Conclusion

In view of the preceding discussion, Applicants respectfully urge that the claims of the present application define patentable subject matter and should be passed to allowance.


If the Examiner believes that a telephone call would help advance prosecution of the present invention, the Examiner is kindly invited to call the undersigned attorney at the number below.

¹ The Office Action erroneously indicates ser. no. 4,358,708, rather than the correct 4,358,707.

Please charge any additional required fees, including those necessary to obtain extensions of time to render timely the filing of the instant Amendment and/or Reply to Office Action, or credit any overpayment not otherwise credited, to our deposit account no. 50-1698.

Respectfully submitted,
THELEN REID & PRIEST, L.L.P.

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